

Psychological Stress and Cancer

The complex relationship between physical and psychological health is not well understood. Scientists know that many types of stress activate the body's endocrine (hormone) system, which in turn can cause changes in the immune system, the body's defense against infection and disease (including cancer). However, the immune system is a highly specialized network whose activity is affected not only by stress but by a number of other factors. It has not been shown that stress-induced changes in the immune system directly cause cancer.

Some studies have indicated an increased incidence of early death, including cancer death, among people who have experienced the recent loss of a spouse or other loved one. However, most cancers have been developing for many years and are diagnosed only after they have been growing in the body for a long time (from 2 to 30 years). This fact argues against an association between the death of a loved one and the triggering of cancer.

The relationship between breast cancer and stress has received particular attention. Some studies of women with breast cancer have shown significantly higher rates of this disease among those women who experienced traumatic life events and losses within several years before their diagnosis. Although studies have shown that stress factors (such as death of a spouse, social isolation, and medical school examinations) alter the way the immune system functions, they have not provided scientific evidence of a direct cause-and-effect relationship between these immune system changes and the development of cancer. One NCI-sponsored study suggests that

there is no important association between stressful life events, such as the death of a loved one or divorce, and breast cancer risk.* However, more research to find if there is a relationship between psychological stress and the transformation of normal cells into cancerous cells is needed.

One area that is currently being studied is the effect of stress on women already diagnosed with breast cancer. These studies are looking at whether stress reduction can improve the immune response and possibly slow cancer progression. Researchers are doing this by determining whether women with breast cancer who are in support groups have better survival rates than those not in support groups.

Many factors come into play when determining the relationship between stress and cancer. At present, the relationship between psychological stress and cancer occurrence or progression has not been scientifically proven. However, stress reduction is of benefit for many other health reasons.

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Sources of National Cancer Institute Information

Cancer Information Service

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

NCI Online

Internet

Use <http://www.cancer.gov> to reach NCI's Web site.

*Self-Reported Stress and Risk of Breast Cancer,” Felicia D. Roberts, Polly A. Newcomb, Amy Trentham-Dietz, and Barry E. Storer. *Cancer*, March 15, 1996.

“Stress and Immune Responses After Surgical Treatment for Regional Breast Cancer,” Barbara L. Andersen, William B. Farrar, Deanna Golden-Kreutz, et al. *Journal of the National Cancer Institute*, January 7, 1998.

CancerMail Service

To obtain a contents list, send e-mail to cancermail@icicc.nci.nih.gov with the word "help" in the body of the message.

CancerFax® fax on demand service

Dial 301-402-5874 and listen to recorded instructions.

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